IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

APPLICANT:	Avetik Harutyunyan
APPLICATION NO.:	10/658,711
FILING DATE:	September 8, 2003
TITLE:	Methods For Preparation Of One-Dimensional Carbon Nanostructures
EXAMINER:	Kelly M. Stouffer
GROUP ART UNIT:	1792
ATTY. DKT. NO.:	23085-08273

CERTIFICATE OF ELECTRONIC (EFS-WEB) TRANSMISSION

I hereby certify that this correspondence is being transmitted via the Office electronic filing system in accordance with 37 C.F.R. § 1.8(a)(i)(C) from the Pacific Time Zone of the United States on the local date shown below.

Dated: September 29, 2008 By: /Narinder Banait/
Narinder S. Banait, Reg. No.: 43,482

MAIL STOP APPEAL BRIEF- PATENTS
COMMISSIONER FOR PATENTS
P.O. BOX 1450
ALEXANDRIA, VA 22313-1450

REPLY BRIEF

This Reply Brief is filed in accordance with 37 CFR § 41.41 in response to the *Examiner's Answer*, mailed on July 30, 2008.

Argument

The Examiner's Answer mailed on July 30, 2008 is responsive to the Appeal Brief filed on June 19, 2008. In the Examiner's Answer, the Examiner restates the rejections set forth in the Final Office Action of August 21, 2007. The Appeal Brief filed on June 19, 2008 fully addresses the deficiencies of these rejections.

In the Examiner's Answer, at page 8, the Examiner agrees with the applicant that Muroyama teaches removing the oxide from the catalyst. The Examiner also appears to agree with the applicant that Muroyama states that removal of the metal oxide provides for reliable growth of the carbon film. However, the Examiner emphasizes that Muroyama only teaches the removal of the native oxide for the more reliable growth of the carbon film, and does not exclude the use of a purposely deposited metal oxide layer. If the presence of native oxide prevents reliable growth of the carbon film, would one of skill in the art not expect a purposely deposited metal oxide layer to also prevent reliable growth of the carbon film?

As the applicant had previously argued, Muroyama discloses three embodiments of their methods for the synthesis of carbon films and the catalyst for use in all three embodiments preferably removes the metal oxide on the surface of the organometallic compound thin layer. Further, Muroyama discloses the use of nickel acetylacetonate as the metalorganic layer in Examples 11 and 12, and in both examples, the corresponding metal oxide is removed. Thus, the Muroyama embodiment that is closest to the applicants' claimed invention, the examples show that the metal oxide is removed.

The Examiner is using an incorrect test in maintaining the obviousness rejection. The Examiner states:

> Though Muroyama teaches that removing native oxide is preferred when using the metalorganic catalyst in paragraph 0095, it by no means requires its removal, only prefers it for Muroyama's own device requirements.

The Examiner's Answer, page 8, lines 17-19.

An obviousness rejection is not proper when the cited references teach away from the claimed invention. The Federal Circuit said "[u]nder the proper legal standard, a reference will teach away when it suggests that the developments flowing from its disclosures are unlikely to produce the objective of the applicant's invention." *Syntex (U.S.A.) LLC v. Apotex Inc.,* 407 F.3d. 1371 (Fed. Cir. 2005). Muroyama explicitly states that the reason for removing the metal oxide is to provide for more reliable growth of the carbon film. Muroyama is clearly teaching away from using an organometallic oxide as the catalyst if one wishes to obtain reliable growth of the carbon film.

This same legal standard for teaching away was used in *Takeda Chemical Industries Ltd. V. Alphapharm Pty.,* 83 U.S.P.Q. 2d 1169 (Fed. Cir. 2007) where the Federal Circuit found that the prior art article was found to teach away from the patented compound because the negative properties would have directed one of ordinary skill away from selecting the compound for further investigation, and in *Inpro II Licensing, S.A.R.L. v. T-Mobil USA, Inc.,* 78 U.S.P.Q. 2d 1786 (Fed. Cir. 2006) where the Federal Circuit noted that Inpro's specification referred to prior-art serial connections as "a big drawback," therefore excluded serial connections. Similarly, Muroyama teaches that the presence of oxides leads to unreliable growth, thereby teaching away from selecting the organometallic of Muroyama as a catalyst

and then oxidizing the catalyst as taught by Dai, and a *prima facie* case of obviousness has not been made.

Summary

For the foregoing reasons, Appellant respectfully submit that the rejection of claims 1-19 is clearly erroneous. Reversal of the final rejection of claims 1-19 is respectfully requested.

Respectfully submitted,

Avetik Harutyunyan

Dated: September 29, 2008

By: /Narinder Banait/

Narinder S. Banait
Registration No. 43,482
Attorney for Applicant
Fenwick & West LLP
801 California Street
Mountain View, CA 94041
Telephone: 650-335-7818
Facsimile: 650-938-5200
E-mail: nbanait@fenwick.com